

**SUBJECT : PRESSURE – TEMPERATURE LIMITS FOR AIRPEL CAST OW FILTERS**

**1.0 SCOPE**

1.1 This specification outlines the temperature related pressure limits in line with various flange drillings for Airpel Cast OW Filters.

**2.0 LIMITATIONS**

2.1 The maximum working pressure at any temperature is limited by either the flange drilling or the vessel rating - the lower value must always be used.

2.2 Ensure that suitable seal material is utilised for the intended operating temperature of the filter unit. The temperature limitations for common seal materials are shown below:

Viton (or Flourocarbon, FPM)	-20 <sup>o</sup> C to +200 <sup>o</sup> C
Nitrile (or Buna N, NBR)	-30 <sup>o</sup> C to +120 <sup>o</sup> C
Ethylene Propylene (or EP, EPDM)	-50 <sup>o</sup> C to +150 <sup>o</sup> C
PTFE (Teflon) encapsulated Viton	-20 <sup>o</sup> C to +200 <sup>o</sup> C
PTFE (Teflon) encapsulated Silicone	-55 <sup>o</sup> C to +260 <sup>o</sup> C

The above values are guidelines based upon absolute compatibility with the fluid and are not binding due to unaccountable factors that may be detrimental to the performance of the 'O' Rings.

2.3 All pressures are non-shock and do not account for excessive pressure or thermal cycling.

2.4 If in doubt about specific applications – contact the Airpel Engineering Department.

2.5 It is the customers responsibility to use suitable flange bolting materials and gaskets to connect the filter unit in line to facilitate the pressure values published.

**3.0 REFERENCE DOCUMENTS**

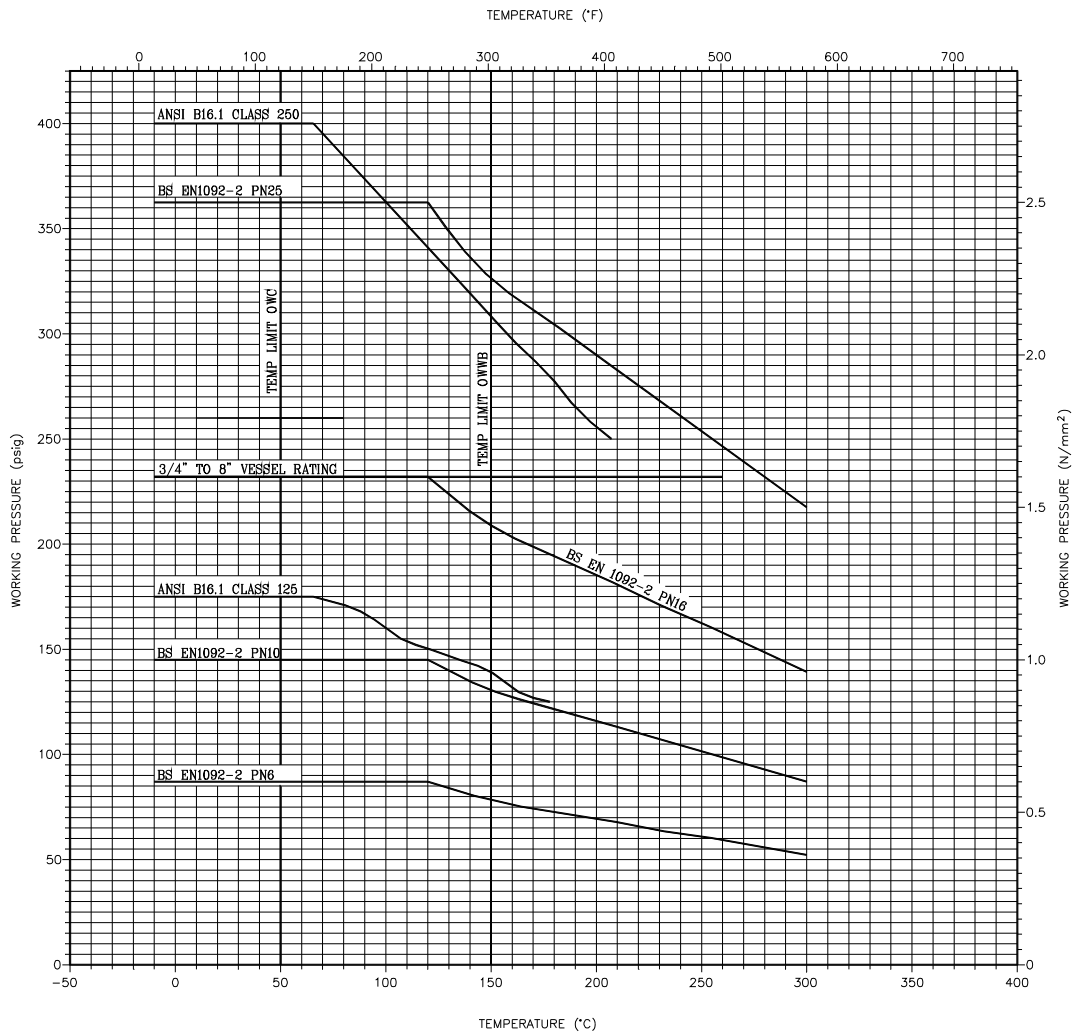
3.1 The following standards have been referenced in this specification:

- ANSI B16.1, 16.24
- BSEN1092-2
- ASME B16.5a – 1998
- BS4504: Section 3.1, 3.3 – 1989

Issue	Original	Rev. 1	Rev. 2	Rev. 3	Rev. 4	Rev. 5
Compiled by	K Dunks	K Dunks				
Approved by	S. Ivey					
Date	26/04/02	01/10/03				

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**4.0 PRESSURE TEMPERATURE CURVES – CAST IRON OWO:**



AIRPEL OWO OWB & OWC PRESSURE TEMPERATURE RATING – CAST IRON

**5.0 MAXIMUM NON-SHOCK WORKING PRESSURE AT 50°C FOR AIRPEL CAST IRON OWO FILTERS:**

¾", 1", 1½", 2", 2½", 3", 4", 6", 8"NB                      17 barg @ 50°C

Extreme caution should be taken on applications below 0°C and above 100°C.

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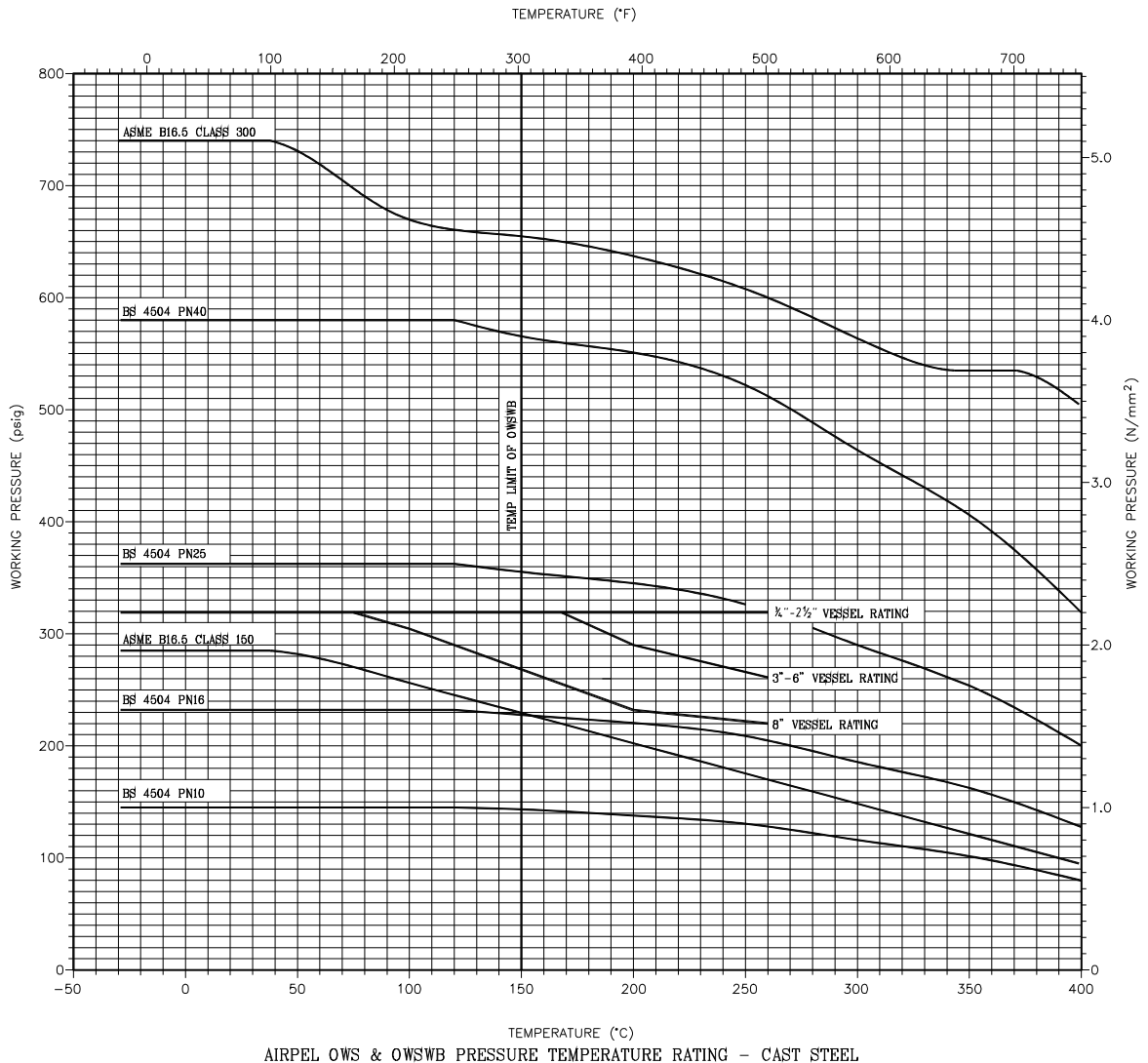
# Airpel Filtration

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## 6.0 PRESSURE TEMPERATURE CURVES – CARBON STEEL OWS:



AIRPEL OWS & OWSWB PRESSURE TEMPERATURE RATING – CAST STEEL

## 7.0 MAXIMUM NON-SHOCK WORKING PRESSURE AT 50°C FOR AIRPEL CAST STEEL OW FILTERS:

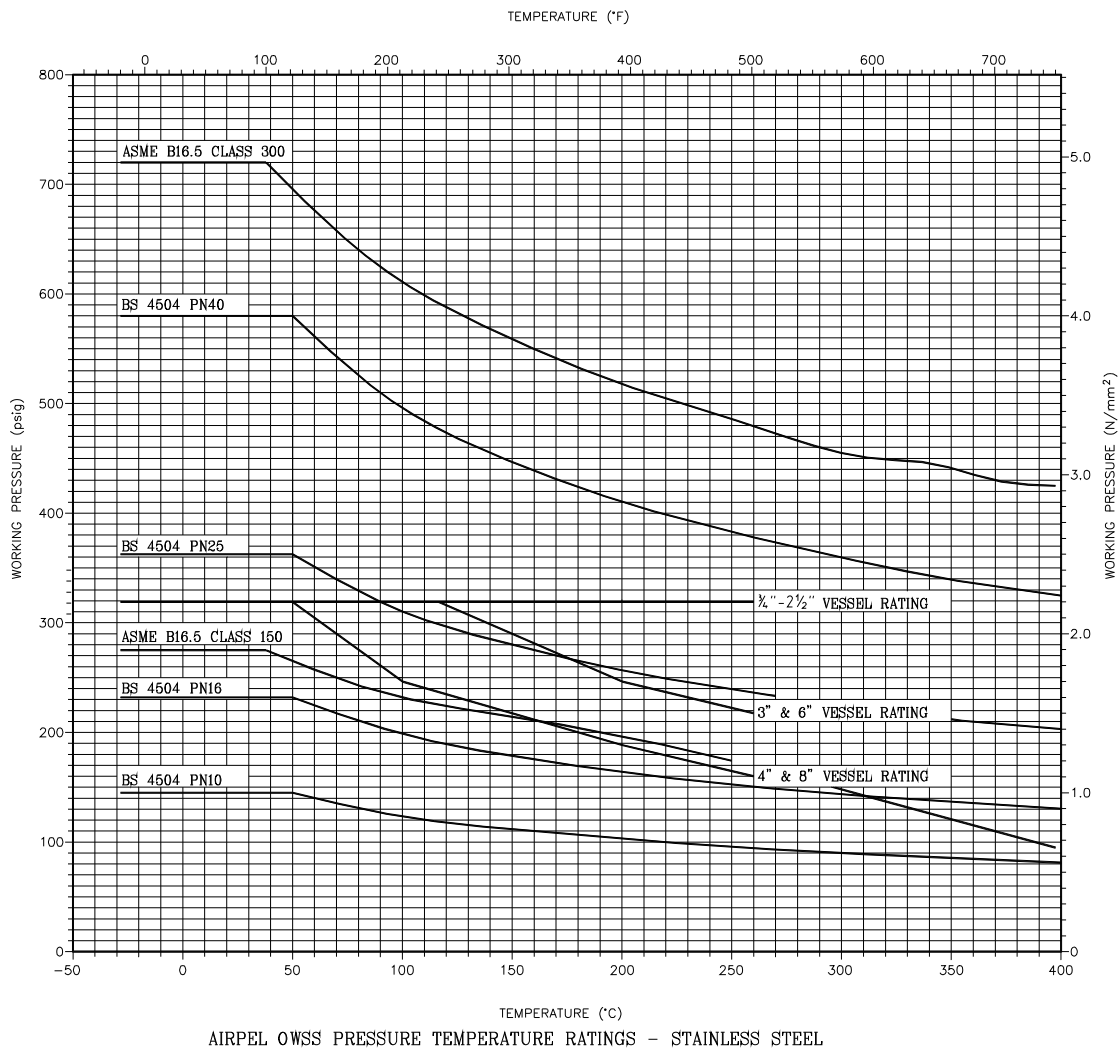
Caution should be taken on applications below 0 °C (unless low temperature steel is specified).

3/4", 1", 1 1/2", 2", 2 1/2", 3", 4", 6", 8"NB      22 barg @ 50°C

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**8.0 PRESSURE TEMPERATURE CURVES – STAINLESS STEEL OWSS:**



**9.0 MAXIMUM NON-SHOCK WORKING PRESSURE AT 50°C FOR AIRPEL CAST STAINLESS STEEL OW FILTERS:**

3/4", 1", 1 1/2", 2", 2 1/2", 3", 4", 6", 8"NB      22 barg @ 50°C

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